

## APPENDIX

4. (amended) The method of one of ~~Claims 1 to 3~~claim 1, wherein in the pursuit phase (30), the steps of estimation of constraints comprises the estimation of a Search-Zone ( $CZ_t$ ) in the image of the present instant (t) around the silhouette ( $\hat{G}_t$ ) for a constrained extraction of the final string of points ( $G_t$ ) in said Search Zone ( $CZ_t$ ).

6. (amended) The method of ~~one of Claims 4 or 5~~claim 4, wherein the steps of estimation of constraints comprises the estimation of an interval of directions ( $\Delta\theta$ ) associated to the points of the Search-Zone.

9. (amended) The method of ~~one of Claims 1 to 8~~claim 1, further comprising, in the pursuit phase (30), steps of tip evaluation for determining whether the tip of the extracted string of points is correctly located for representing the threadlike structure in the image of the present instant.

11. (amended) The method of ~~one of Claim 1 to 10~~claim 1 having a loop (4) between the pursuit phase (30) and the prediction phase (30) for improving the detection of the silhouette ( $\hat{G}_t$ ) and the

extraction of the string of points ( $G_t$ ) for representing the threadlike structure (GW) in the image of the present instant (t).

12. (amended) A system comprising a suitably programmed computer or a special purpose processor having circuit means, which are arranged to process image data according to the method as claimed in ~~any one of the preceding Claims~~claim 1.

14. (amended) A computer program product comprising a set of instructions for carrying out a method as claimed in ~~one of Claims 1 to 11~~claim 1.